



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-1041; Directorate Identifier 2011-NM-272-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 727 airplanes; Model 737-100, -200, and -200C series airplanes; and Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, 747SR, and 747SP series airplanes. This proposed AD was prompted by a report of an activation of the control column shaker during takeoff. This proposed AD would require performing a general visual inspection to determine if a certain angle of attack (AOA) sensor with a paddle type vane is installed, and, for affected sensors, performing an operational test of the stall warning system, and replacing the AOA sensor with a new sensor if necessary. We are proposing this AD to prevent erroneous activation of the control column shaker during takeoff, which could result in runway overrun, failure to clear terrain or obstacles after takeoff, or reduced controllability of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Ray Mei, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, Seattle Aircraft Certification Office, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6467; fax: 425-917-6590; email: raymont.mei@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-1041; Directorate Identifier 2011-NM-272-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have received a report of an erroneous activation of the control column shaker during takeoff of a Model 747-400 airplane. The control column shaker activation continued while the airplane was in flight, and engine-indicating and crew-alerting system (EICAS) messages ALT DISAGREE and IAS DISAGREE displayed. The flightcrew used the alternate air data computer (left ADC) and the altitude and airspeed indications cancelled. After landing, the right ADC was replaced. On the subsequent flight the control column shaker operated again at takeoff and the flightcrew had to do a rejected takeoff (RTO). Troubleshooting steps found that the right AOA sensor was unserviceable. Inspection of the AOA sensors showed that the set screw connected to the synchro transmitter was not correctly attached to the AOA sensor shaft. Certain Model 727 and 737 airplanes also use Conrac/Ametek/Gulton AOA sensors that are equivalent in design and construction to the defective AOA sensor on the Model 747-400 airplane.

This condition, if not corrected, could result in runway overrun, failure to clear terrain or obstacles after takeoff, or reduced controllability of the airplane.

Relevant Service Information

We reviewed the following service information:

- Boeing Special Attention Service Bulletin 727-34-0245, dated June 4, 2008 (for Model 727 airplanes);
- Boeing Special Attention Service Bulletin 737-34-2102, dated June 5, 2008 (for Model 737-100, -200, and -200C series airplanes); and
- Boeing Special Attention Service Bulletin 747-34-2925, dated June 4, 2008 (for Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, 747SR, and 747SP series airplanes).

The service information describes procedures for performing a general visual inspection to determine if a certain AOA sensor with a paddle type vane is installed; and performing an operational test, and replacing the AOA sensor with a new sensor if necessary.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously.

Costs of Compliance

We estimate that this proposed AD affects 1,013 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$258,315

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need this replacement:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replacement	Up to 2 work-hours X \$85 per hour = \$170	Up to \$36,552	Up to \$36,722

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2012-1041; Directorate Identifier 2011-NM-272-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company series airplanes, certificated in any category, as specified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD.

(1) Model 727, 727C, -100, -100C, -200, and -200F series airplanes, identified in Boeing Special Attention Service Bulletin 727-34-0245, dated June 4, 2008.

(2) Model 737-100, -200, and -200C series airplanes, identified in Boeing Special Attention Service Bulletin 737-34-2102, dated June 5, 2008.

(3) Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, 747SR, and 747SP series airplanes, identified in Boeing Special Attention Service Bulletin 747-34-2925, dated June 4, 2008.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 3418, Stall Warning System.

(e) Unsafe Condition

This AD was prompted by a report of an erroneous activation of the control column shaker during takeoff. We are issuing this AD to prevent erroneous activation of the control column shaker during takeoff, which could result in runway overrun, failure to clear terrain or obstacles after takeoff, or reduced controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection

Within 36 months after the effective date of this AD: Do a general visual inspection of the left and right angle of attack (AOA) sensor as applicable, to determine if a certain AOA sensor with a paddle type vane is installed, in accordance with the Accomplishment Instructions of the applicable service information specified in paragraph (g)(1), (g)(2), or (g)(3) of this AD.

(1) Boeing Special Attention Service Bulletin 727-34-0245, dated June 4, 2008 (for Model 727 airplanes).

(2) Boeing Special Attention Service Bulletin 737-34-2102, dated June 5, 2008 (for Model 737-100, -200, and -200C series airplanes).

(3) Boeing Special Attention Service Bulletin 747-34-2925, dated June 4, 2008 (for Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, 747SR, and 747SP series airplanes).

(h) Operational Test and Replacement

If, during the inspection required by paragraph (g) of this AD, an AOA sensor with a paddle type vane is installed: Before further flight, do an operational test of the stall warning system, in accordance with Part 2 of the Accomplishment Instructions of the applicable service information specified in paragraph (g)(1), (g)(2), or (g)(3) of this AD.

(1) For group 2 airplanes identified in Boeing Special Attention Service Bulletin 747-34-2925, dated June 4, 2008: If you cannot get the values given in the table specified in Part 2 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-34-2925, dated June 4, 2008, before further flight, replace the AOA sensor, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-34-2925, dated June 4, 2008.

(2) For all airplanes, except those identified in paragraph (h)(1) of this AD: If the AOA sensor fails to activate the control column shaker in the operational test, replace the AOA sensor with a new AOA sensor, in accordance with Part 3 of the Accomplishment Instructions of the applicable service information specified in paragraph (h)(2)(i), (h)(2)(ii), or (h)(2)(iii) of this AD.

(i) Boeing Special Attention Service Bulletin 727-34-0245, dated June 4, 2008 (for Model 727 airplanes).

(ii) Boeing Special Attention Service Bulletin 737-34-2102, dated June 5, 2008 (for Model 737-100, -200, and -200C series airplanes).

(iii) Boeing Special Attention Service Bulletin 747-34-2925, dated June 4, 2008 (for Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, -400, -400D, -400F, 747SR, and 747SP series airplanes).

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office, (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be e-mailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Ray Mei, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, Seattle Aircraft Certification Office, FAA,

1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6467; fax: (425) 917-6590; email: raymont.mei@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on September 26, 2012.

Ali Bahrami,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2012-24807 Filed 10/09/2012 at 8:45 am; Publication Date: 10/10/2012]